

13  
C1  
conducting UHV desorption of native oxide on W under a pressure of  $10^{-9}$  torr at  $750^{\circ}\text{C}$  for 5 minutes;

forming a monolayer of W-Si silicide at  $625^{\circ}\text{C}$  for 1.5 minutes using  $\text{SiH}_4$  such that a bare W surface reacts with Si to form a monolayer of W-Si; and

performing nitridation of W-Si at  $750^{\circ}\text{C}$  for 30 minutes with  $\text{NH}_3$  and reacting active  $\text{NH}_3$  with W-Si to form W-Si-N.

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12. (Amended) The method of claim 1, wherein a multilayer stack is formed on said substrate, wherein said substrate with said multilayer stack is bonded to a silicon substrate and annealed to strengthen the bond across the bonding interface.

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16. (Amended) The method of claim 15, wherein annealing conditions including any of a ramp-up rate, a ramp-down rate, a stabilization temperature, and a stabilization temperature time are optimized to minimize stress induced by thermal mismatch of different materials of said metal back-gate, said substrate, said passivation layer and said intermediate gluing layer.

17. (Amended) The method of claim 1, wherein said intermediate gluing layer comprises a Si-based intermediate layer.

**Please add the following new claims:**

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--36. The method of claim 1, wherein a low temperature oxide (LTO) is deposited on the metal back-gate.

37. The method of claim 18, wherein a low temperature oxide (LTO) is deposited on the metal back-gate.

38. The method of claim 19, wherein a low temperature oxide (LTO) is deposited on the refractory metal.--